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The Lygaeidae (Insecta, Heteroptera) from Hokkaido, Japan, with Description of a New *Trichodrymus* Species

By

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Since DISTANT (1883) described a new species,[1] *Dieuches dissimilis* (present combination: *Paradieuches dissimilis*), from Hakodate, about 30 species of the Lygaeidae have been described or reported from Hokkaido mainly by such European and Japanese heteropterists as HORVÁTH (1899), MATSUMURA (1905, 1931), ESAKI (1950), TAKAGI (1958), HIDAKA (1959, 1962a, b, 1963a, b, 1964) and MIYAMOTO (1969, 1987). However, our knowledge of the lygaeid fauna of this zoogeographically attractive island is still rather poor as compared with that of the other areas of Japan.

In the present paper, I am going to record 40 species of lygaeid bugs from Hokkaido with brief notes on their taxonomy and/or distribution mainly based on the collection of the National Science Museum, Tokyo. One of them is described herewith as a new species of the genus *Trichodrymus*.

I express my warmest thanks to Prof. Sadao TAKAGI of Hokkaido University, Prof. Katsura MORIMOTO of Kyushu University and Dr. Mutsuo MIYATAKE of Ehime University for their kind permission of borrowing materials, and to Drs. Yoshihisa KUSUI, Sumiaki MIYAKAWA, Yutaka NISHIJIMA, Hirotsugu ONO, Masahiro SAKAI, and Masataka SATÔ for giving me valuable specimens. My thanks are also due to Dr. Shun-Ichi UÉNO of our Museum who carefully read the manuscript of this paper. The depository of the specimens listed here is abbreviated as follows: HU, Laboratory of Systematic Entomology, Hokkaido University; EU, Entomological Laboratory, Ehime University; KU, Entomological Laboratory, Kyushu University; No abbr., Department of Zoology, National Science Museum, Tokyo.

List of the Lygaeidae from Hokkaido

Lygaeinae

1. *Lygaeus equestris* (LINNAEUS, 1758) マダラナガカメムシ

Specimens examined: 1♂, Tokachidake Spa, Sorachi, 9–X–1985, Y. KUSUI; 3♂, Kamoenai, Shakotan, 23–VI–1986, M. TOMOKUNI; 1♀, Hariusu, Otaru, 4–VIII–1938, S. IJIRI; 2♀, Mt. Teine,

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[1] Since the Japanese Lygaeidae reported by MOTSCHULSKY (1866) and SCOTT (1874, 1880) were based on the materials obtained from I. A. GOSCHKEVITSCH and G. LEWIS, respectively, both of whom had collected insects in Hokkaido, some specimens from the island might be included in their accounts. However, the authors did not mention any detailed locality other than "Japan".

21–VI–1956, R. KANO; 1♀, Nopporo, Ebetsu, 26–VI–1986, M. TOMOKUNI; 9♂5♀, Mt. Moiwa, Sapporo, 18–VI–1986, M. TOMOKUNI; 5♂5♀, Hitsujigaoka, Sapporo, 2–IX–1977, M. TOMOKUNI; 1♀, Hitsujigaoka, Sapporo, 22–VIII–1977, M. TOMOKUNI; 6♂8♀, Mt. Hakkenzan, Misumai, Sapporo, 20–VI–1986, M. TOMOKUNI; 1♀, Muine-ohashi, near Jozankei, 22–VI–1986, S. MIYAKAWA; 1♂, Jozankei, Sapporo, 3–VIII–1984, M. TOMOKUNI; 1♂, Kozawa, Kyowa-cho, Shiribeshi, 16–X–1983, Y. KUSUI; 2♀, Takino, Eniwa, 27–VI–1986, S. MIYAKAWA; 1♂1♀, Oonuma, Oshima, 8–VII–1979, Y. KUSUI; 1♀, Tamaura, Okushiri Is., 11–X–1986, Y. KUSUI; 1♀, Horonai, Okushiri Is., 28–VI–1986, Y. KUSUI; 1♂, Shiokamagawa, Okushiri Is., 26–VI–1986, Y. KUSUI.

2. *Tropidothorax cruciger* (MOTSCHULSKY, 1859) ジュウジナガカメムシ

Specimen examined: 1♀, Higure-yama, near Oonuma, Nanae-cho, 28–VI–1986, M. TOMOKUNI.

Additional records on literature: Hokkaido (MATSUMURA, 1905); southern Hokkaido (KUNIKANE, 1974); Sapporo (NISHIJIMA, 1938; TAKAGI, 1958).

3. *Arocatus rufipes* STÅL, 1872 (=*A. fasciatus* JAKOVLEV) アシアカナガカメムシ

Specimens examined: 1♂, Moiwa, Tomari-mura, Shakotan, 23–VI–1986, M. TOMOKUNI; 1♂, Mt. Inaho-rei 500 m alt., Kyowa-cho, Shiribeshi, 24–VI–1986, M. TOMOKUNI.

Additional record on literature: Hokkaido (HORVÁTH, 1899).

Orsillinae

4. *Nysius expressus* DISTANT, 1883 エチゴヒメナガカメムシ

Specimens examined: 1♀, Soya-misaki, Wakkanai, 11–VII–1990, H. ONO; 3♀, Megumagenseikaen, near Wakkanai, 25–VIII–1977, M. SATÔ; 1♂1♀, Koeto, Wakkanai, 11–VII–1990, H. ONO; 1♂1♀, Wakasakinai, Sarobetsu-genya, Teshio-gun, 24–VIII–1977, M. TOMOKUNI; 4♀, Komuke-genseikaen, near Monbetsu, 27–VIII–1977, M. TOMOKUNI; 1♂1♀, Notoro-misaki, Abashiri, 6–IX–1992, H. ONO; 10♂10♀, Kiyosato, Ikutawara-cho, Monbetsu-gun, 27–VIII–1977, M. TOMOKUNI; 1♀, Shotoshibetsu, Rikubetsu, Tokachi, 24–VII–1984, M. TOMOKUNI; 1♀, Tokutomi, near Takigawa, 23–VIII–1977, M. TOMOKUNI; 1♀, L. Mashu-ko to Teshikaga-cho, 2–X–1993, M. TOMOKUNI; 2♀, Lakeside of Akan-ko L., 5–IX–1992, H. ONO; 2♀, Akan, 8–VIII–1976, T. KAWASAWA; 1♂, Mitsumata, Kamishihoro, Tokachi, 22–VII–1984, M. TOMOKUNI; 1♀, On'nenai, Tsurui, Kushiro Marsh, 27–VIII–1990, M. SAKAI; 41♂ 34♀, Nopporo, Ebetsu, 2–VIII–1984, M. TOMOKUNI; 9♂20♀, Jozankei, Sapporo, 3–VIII–1984, M. TOMOKUNI; 1♂1♀, Jozankei, Sapporo, 21–22–VIII–1977, M. TOMOKUNI; 4♂6♀, Vic. Okotan, Lake Shikotsu, 21–VIII–1977, M. TOMOKUNI; 7♂3♀, Nakasatsunai, Kasai, Tokachi, 21–VII–1984, M. TOMOKUNI; 1♂, Samani, Hidaka, 29–VII–1984, M. TOMOKUNI.

Ischnorhynchinae

5. *Pylorgus colon* (THUNBERG, 1784) ムラサキナガカメムシ

Specimen examined: 1♀, Mt. Higurashi-yama, Ohnuma Park, 30–VI–1988, S. MIYAKAWA.

Additional record on literature: Hokkaido (HASEGAWA, 1960).

6. *Kleidocerys resedae* (PANZER, 1797) ウスイロヒラタナガカメムシ

Specimens examined: 1♀, Kawayu Spa, Teshikaga-cho, 1–X–1993, M. TOMOKUNI; 1♂,

Moiwa, Tomari-mura, Shakotan, 23–VI–1986, M. TOMOKUNI; 5♂3♀, Nopporo Forest Park, Ebetsu, 26–VI–1986, M. TOMOKUNI; 1♂, Mt. Moiwa, Sapporo, 1–VIII–1984, M. TOMOKUNI; 4♂1♀, Mt. Hakkenzan, Misumai, Sapporo, 20–VI–1986, M. TOMOKUNI; 1♂, Toyokita Seashore, Urahoro-cho, 26–VI–1986, S. MIYAKAWA.

Cyminae

7. *Cymus glandicolor* HAHN, 1831 オオヒメヒラタナガカメムシ

Specimens examined: 2♂, Sarobetsu-genseikaen, 24–VIII–1977, M. TOMOKUNI; 1♂1♀, Wakasakinai, Sarobetsu-genya, Teshio-gun, 24–VIII–1977, M. TOMOKUNI; 1♂, Toyotomi-onsen, 24–VIII–1977, M. SATO; 13♂9♀, Shirakaba, Horokanai, Sorachi, 25–VII–1984, M. TOMOKUNI; 11♂10♀, Kiyosato, Ikutawara-cho, Monbetsu-gun, 27–VIII–1977, M. TOMOKUNI; 1♀, Kawayu, 22–VII–1970, M. SAKAI; 5♂1♀, Shotoshibetsu, Rikubetsu, Tokachi, 24–VII–1984, M. TOMOKUNI; 1♂, Tokutomi, near Takigawa, 23–VIII–1977, M. TOMOKUNI; 7♂5♀, Mitsumata, Kamishihoro, Tokachi, 22–VII–1984, M. TOMOKUNI; 1♀, Nonamai, Shakotan, 22–VI–1986, M. TOMOKUNI; 1♂1♀, Tohmaru Pass 500m alt., Shakotan, 23–VI–1986, M. TOMOKUNI; 1♂, Iwabokki, Kushiro Marsh, 26–VIII–1990, M. SAKAI; 7♂5♀, Akanuma, Kushiro Marsh, 25–VIII–1990, M. SAKAI; 1♂, Kirakotan-misaki, Kushiro Marsh, 25–VIII–1990, M. SAKAI.

8. *Cymus aurescens* DISTANT, 1883 ヒメヒラタナガカメムシ

Record on literature: Maruyama, Sapporo (TAKAGI, 1958). This may be the only record of this species from Hokkaido.

Blissinae

9. *Dimorphopterus pallipes* (DISTANT, 1883) コバネナガカメムシ

Specimens examined: 28♂ (6 macrop., 22 brachyp.) 31♀ (4 macrop., 27 brachyp.), Sawae, Furubira-cho, Shakotan, 22–VI–1986, M. TOMOKUNI & M. SAKAI; 1♂3♀, Horonai, Okushiri Is., 28–VI–1986, Y. KUSUI; 1♀, Aonaegawa, Okushiri Is., 28–VI–1986, Y. KUSUI.

10. *Dimorphopterus spinolae* (SIGNORET, 1857) エゾコバネナガカメムシ（新称）

Specimens examined: 1♀, Meguma-genseikaen, near Wakkanai, 25–VIII–1977, M. SATO; 1♀, Notoro-misaki, Abashiri, 6–IX–1992, H. ONO; 2♂3♀, Shari, 17–VII–1976, M. SATO; 36♂31♀, Nishikawa, Shakotan, 22–VI–1986, M. TOMOKUNI & M. SAKAI; 1♀, Shoro Beach, Shiranuka-cho, 28–VIII–1990, M. SAKAI; 1♂, Toyokita Seashore, Urahoro-cho, 26–VI–1986, S. MIYAKAWA; 9♂11♀, Shadai, Shiraoi-cho, Iburi, 30–VI–1986, M. TOMOKUNI; 1♀, Noboribetsu, Iburi, 30–VI–1986, M. TOMOKUNI; 4♂7♀, Mori, Oshima, 11–V–1976, M. SAKAI.

Notes. This species is very closely related to *D. japonicus* (HIDAKA, 1959), which is distinguished from the former by a little larger body, longer and denser pubescence on dorsum and yellowish legs. JOSIFOV and KERZHNER (1978) once synonymized *japonicus* with *spinolae*, and included Japan in the distributional range of the latter. The junior author (KERZHNER, 1988) subsequently stated that *japonicus* was a distinct species, and excluded *spinolae* from the Japanese fauna. Thus, this is the first record of true *spinolae* from Japan. All of the examined specimens are brachypterous.

11. *Macropes obnubilus* (DISTANT, 1883) ホソコバネナガカメムシ

Specimens examined: 1♂2♀ (macrop.), Iwanai, Shiribeshi, 14–V–1976, M. SAKAI.

Additional records on literature: Maruyama, Sapporo (TAKAGI, 1958); Hokkaido (HASEGAWA, 1960).

Geocorinae

12. *Hypogeocoris itonis* (HORVÁTH, 1905) クロツヤオオメカメムシ

Specimens examined: 1♀, Ubaranai, Abashiri, 11–IX–1974, Y. FURUKI; 1♂1♀, Kiyosato, Ikutawara-cho, Monbetsu-gun, 27–VIII–1977, M. TOMOKUNI; 1♀, Shotoshibetsu, Rikubetsu, Tokachi, 24–VII–1984, M. TOMOKUNI; 1♀, Jozankei, Sapporo, 3–VIII–1984, M. TOMOKUNI.

13. *Geocoris* sp.

Specimens examined: 1♂2♀, Wakasakinai, Sarobetsu-genya, Teshio, 24–VIII–1977, M. TOMOKUNI; 2♀, Samani, Hidaka, 29–VII–1984, M. TOMOKUNI.

Notes. This is quite similar to *G. proteus* DISTANT known from Honshu, Shikoku and Kyushu. The species differs from the latter in its large size and much darker coloration throughout the body.

Pachygronthinae

14. *Pachygrontha antennata* (UHLER, 1860) ヒゲナガカメムシ

Specimens examined: 1♂, Tokutomi, near Takigawa, 23–VIII–1977, M. TOMOKUNI; 2♂2♀, Ashoro, Ashoro-cho, 23–VI–1986, S. MIYAKAWA; 1♂, Nopporo, Ebetsu, 2–VIII–1984, M. TOMOKUNI; 1♂, Akanuma, Kushiro Marsh, 25–VIII–1990, M. SAKAI; 1♀, Kirakotan-misaki, Kushiro Marsh, 25–VIII–1990, M. SAKAI; 1♀, Tomakomai Nat. Forest, 21–VIII–1977, M. TOMOKUNI; 1♂, Konuma, Ohnuma Park, 30–VI–1988, S. MIYAKAWA; 1♂, Tamaura, Okushiri Is., 11–X–1986, Y. KUSUI.

Heterogastrinae

15. *Heterogaster urticae* (FABRICIUS, 1775) クロマダラナガカメムシ

Specimen examined: 1♀, Ashoro, Ashoro-cho, 25–VI–1986, S. MIYAKAWA.

Additional record on literature: Hokkaido (HIDAKA, 1965).

Rhyparochrominae

Lethaeini

16. *Neolethaeus dallasi* (SCOTT, 1874) チャイロナガカメムシ

Specimens examined: 1♂, Nopporo, Ebetsu, 2–VIII–1984, M. TOMOKUNI; 1♂, Mt. Daisengendake 720 m alt., Oshima Pen., 28–VIII–1986, T. YAMASAKI.

Additional records on literature: Hokkaido (HASEGAWA, 1960); Sapporo, Maruyama and Jozankei (HIDAKA, 1962 a).

Antillocorini

17. *Iodinus ferrugineus* LINDBERG, 1927 ヒナナガカメムシ

Specimens examined: 1♀, Ubaranai, Abashiri, 11–IX–1974, Y. FURUKI (EU); 1♂, Sapporo, 25–VI–1952, T. TOMIOKA (HU); 1♂2♀, Utonai-numa, Tomakomai, 26–IX–1988, Y. NISHIJIMA; 1♀, Aonaegawa V. 220 m alt., Okushiri Is., 31–VIII–1986, S. UÉNO.

Notes. So far as known to me, this is the first record of the species from Hokkaido.

18. *Botocudo japonicus* (HIDAKA, 1959) ヨツボシチビナガカメムシ

Record on literature: Nopporo (MIYAMOTO, 1969). This is the only record of this minute lygaeid from Hokkaido.

Drymini

19. *Gastrodes grossipes japonicus* (STÅL, 1874) マツヒラタナガカメムシ

Specimen examined: 1♂, Aizankei, 6–IX–1977, A. ODA.

Notes. This is the first record of the species from Hokkaido.

20. *Lamproplax majuscula* KERZHNER, 1976 オオツヤナガカメムシ

Specimens examined: 2♀, Zenibako, Otaru, 26–III–?, S. MATSUMURA (HU).

Additional record on literature: Rishiri Island, off Hokkaido (TOMOKUNI, 1992).

21. *Lamproplax takahashii* HIDAKA, 1962 エゾツヤナガカメムシ

Specimens examined: 2♂, Shiretoko-toge, ca. 650 m alt., 21–VIII–1990, M. SAKAI; 1♂1♀, Tohmaru Pass 640 m alt., Shakotan, 23–VI–1986, M. TOMOKUNI.

Additional record on literature: Maruyama, Sapporo (HIDAKA, 1962 b).

Notes. I wrongly reported this species as *L. unispina* KERZHNER from Rishiri Island, off Hokkaido (TOMOKUNI, 1992).

22. *Lamproplax unispina* KERZHNER, 1976 チビツヤナガカメムシ

Specimens examined: 1♂2♀, Wayside pond near Shiretoko-goko, 22–VIII–1990, M. SAKAI; 1♂, Aonaegawa V. 220 m alt., Okushiri Is., 31–VIII–1986, S. UÉNO.

Notes. So far as known to me, this is the first record of true *L. unispina* from Hokkaido.

23. *Scolopostethus thomsoni* REUTER, 1874 コカスリナガカメムシ

Specimens examined: 12♂10♀, Mt. Horoshiri-dake, Hidaka, 24–VII–1971, J. AOKI; 1♂1♀, Sekihoku Pass 900 m alt., 20–VIII–1990, M. SAKAI; 1♂, Mt. Daisetsu–Sounkyo, 3–VII–1958, M. MIYATAKE (EU); 2♂, Iwabokki, Kushiro Marsh, 26–VIII–1990, M. SAKAI; 1♀, Jozankei, 1–IX–1974, Y. FURUKI (EU); 1♀, Mt. Rausu–Iwaobetsu, 25–VII–1970, S. KINOSHITA (EU); 1♀, Ashoromura, Tokachi, 7–VIII–1949, R. MATSUDA (KU).

Additional records on literature: Hoheikyo and Odaitô (MIYAMOTO, 1987); Rishiri Is., off Hokkaido (TOMOKUNI, 1992).

24. *Eremocoris plebejus* (FALLÉN, 1807) オオムラクモナガカメムシ（新称）

Specimen examined: 1♀, Mt. Apoi-dake 300 m alt., Hidaka, 5–X–1968, M. MIYATAKE (EU).

Notes. This is a species newly added to the lygaeid fauna of Japan.

25. *Eremocoris angusticollis* JAKOVLEV, 1881 ムラクモナガカメムシ

Specimen examined: 1♂, Sapporo, 19–V–1918, S. ISSIKI (KU).

Notes. This is the first record from Hokkaido.

26. *Drymus* (*Drymus*) *latus obscurior* KERZHNER, 1976 コゲチャナガカメムシ（新称）

Specimens examined: 1♀, Sarubobira, Kushiro Marsh, 29–VIII–1990, M. SAKAI; 1♂, Sapporo, 21–X–?, S. MATSUMURA (HU).

Additional record on literature: Akan (HIDAKA, 1962 b).

27. *Drymus* (*Drymus*) *pilicornis* (MULSANT et REY, 1852) ヒゲクロナガカメムシ
Record on literature: Obihiro (HIDAKA, 1962 b).

28. *Drymus* (*Sylvadrymus*) *marginatus* DISTANT, 1883 クロナガカメムシ
Record on literature: Shosenkyo (HIDAKA, 1962 b).

29. *Trichodrymus pameroides* LINDBERG, 1927 ケブカナガカメムシ
Specimens examined: 2♀, Futatsuiwa, Abashiri, 12–IX–1974, Y. FURUKI (EU); 1♀, Jozankei, 1–IX–1961, S. HISAMATSU (EU).
Additional record on literature: Rishiri Is., off Hokkaido (TOMOKUNI, 1992).

30. ***Trichodrymus major*** sp. nov. (Figs. 1–5)
[Japanese name: Oh-kebuka-nagakamemushi]

Female (*Holotype*) (Fig. 1). General color brownish black except for head shining black and for hemelytra and posterior lobe of pronotum which are mostly brown with dark punctures. Several small antero-median spots on anterior pronotal lobe brown; median longitudinal streaks on posterior pronotal lobe and on apical part of scutellum also brown. A large apical triundulate marking of corium chocolate-brown. Thorax beneath opaque showing a remarkable contrast to lustrous abdominal sternum.

Body length 6.8, width 2.6, pronotal length along meson 1.5, pronotal width across humeri 2.4, antennal length 3.7 in mm, respectively. Body moderately elongate, parallel-sided, covered with dense erect dark hairs.

Head weakly punctate, convex beneath, shorter than width across eyes, with long erect hairs intermixed with short decumbent pubescence. Eye large, sparsely with short erect setae. Antenna densely clothed with erect and oblique hairs; 1st segment distinctly surpassing more than half of its length beyond apex of head; proportion of each segment as 1 : 2 : 1.5 : 1.6. Rostrum pilose, long, extending a little beyond mid coxae; segment 1 reaching base of head; relative lengths of 1st to 4th segments as 1 : 1.3 : 1 : 0.8.

Pronotum trapezoidal, very slightly constricted at middle, with lateral carinae distinctly narrower than 2nd antennal segment; anterior lobe impunctate on disk, with several faint punctures on marginal area; posterior lobe extensively with punctures becoming smaller basad, strongly depressed and roundly protruded posteriorly near humeri, with posterior margin adjacent to scutellum clearly bisinuate. Scutellum remarkably tumid and flattened basally, nearly equilateral triangular, evenly punctate except for a short median carina on apical area which is impunctate.

Hemelytron normal in shape; clavus with two full and a short additional rows of punctures; corium about twice as long as pronotal length, with a little reflexed costal margin as wide as 4th antennal segment at the widest part, and with apical margin very slightly arcuate; inner half of corium with two regular rows of punctures on its inner half, irregularly punctate on its outer half; outer half of corium rather irregularly punctate as compared with inner half; membrane extending a little beyond posterior margin of 7th tergite.

Thorax beneath somewhat coarsely punctate except for all acetabula, lateral areas of each pleuron, and meso- and metasterna, which are impunctate, clothed with long suberect hairs only on each lateral area of meso- and metapleura; peritreme of metathoracic scent gland opening elongate, strongly curved backward. Leg of moderate length, devoid of spine on each femur, but with long

Fig. 1. *Trichodrymus major* sp. nov., holotype ♀.

bristle-like hairs somewhat regularly arranged on each femur and tibia amongst numerous oblique hairs; each 1st segment of fore- and midtarsi as long as the following two segments combined, and of hind-tarsus distinctly longer than the followings.

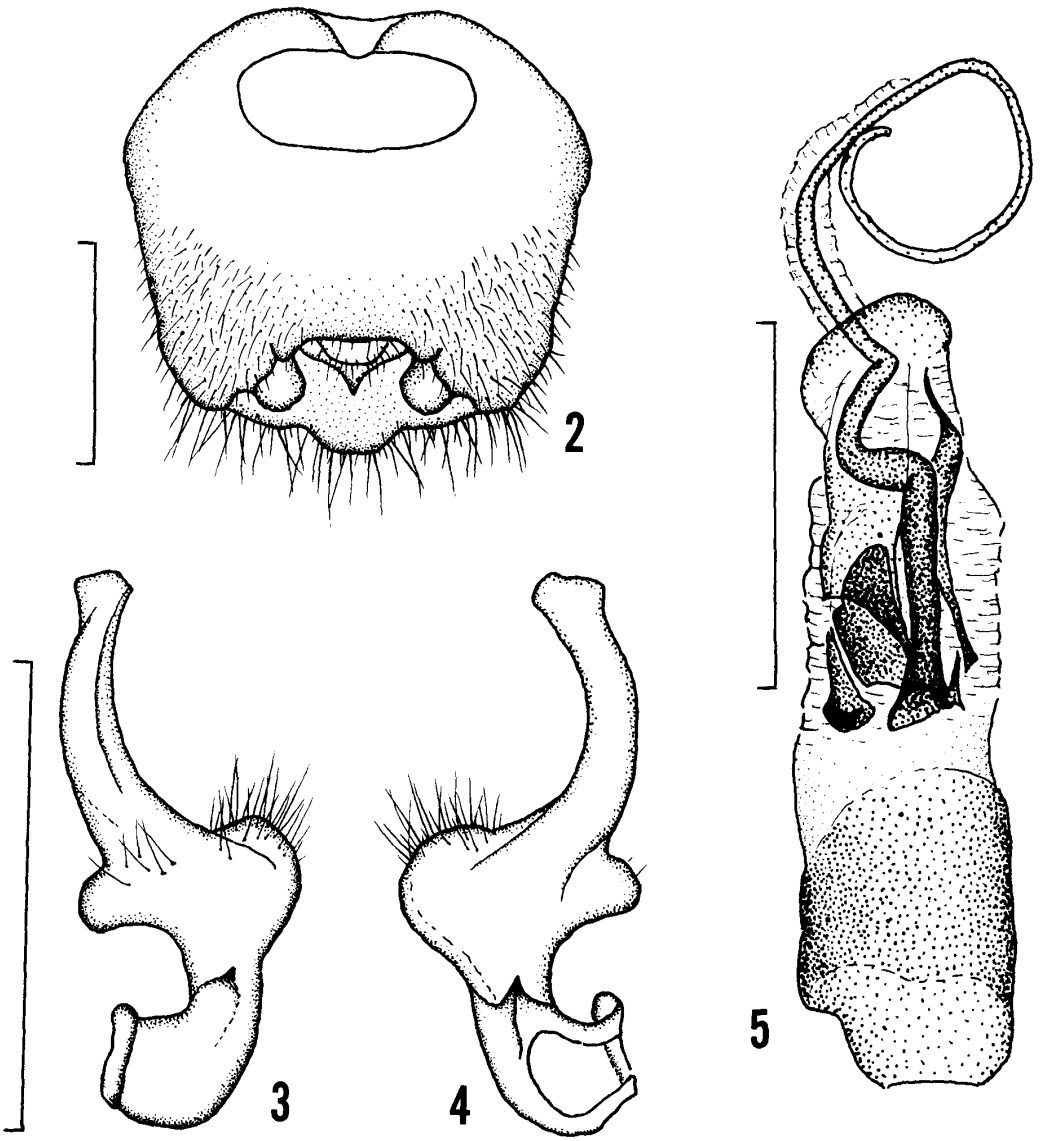
Abdomen beneath not punctate but very weakly wrinkled, covered with long erect sparse hairs and rather short depressed hairs; connexivum vertical, wide, as wide as clavus at the widest part.

Male. Almost same in appearance as female except for genital segment and somewhat slenderer body. Pygophore (Fig. 2) with a prominent projection on its distal margin, clothed with long hairs on distal third. Paramere (Figs. 3 & 4) with large basal part expanding over both sides of shank, clothed with long sensory hairs from distal surface of inner process to intero-basal surface of blade; apex of blade somewhat lamellately expanded. Phallus (Fig. 5) weakly sclerotized, with an asymmetrical pair of conjunctival spines, of which the right one is much longer than the left; gonoporal process of vesica short.

Type series. Holotype ♀: Tobira Spa, Nagano Pref., Japan, 30–VII–1973, M. TOMOKUNI leg. Six paratypes: 1♂, Nakasatsunai, Kasai, Tokachi, Hokkaido, Japan, 21–VII–1984, M. TOMOKUNI leg.; 1♀, Mt. Meakan, Akan Nat. Park, Hokkaido, 7–VII–1958, M. MIYATAKE leg. (EU); 1♀, Tateiwa-mura, Fukushima Pref., 28–VI–1981, G. TOKIHIRO leg. (EU); 1♀, Nidoage, Gunma Pref., 31–VII–1957, Y. SUZUKI leg. (EU); 1♀, same data as the holotype; 1♀, Shirahone, Nagano Pref., 4–VIII–1959, M. MIYATAKE leg. (EU).

Distribution. Japan (Hokkaido and northern Honshu).

Remarks. This new species is easily distinguishable from *Trichodrymus pameroides* LINDBERG



Figs. 2–5. Male genitalia of *Trichodrymus major* sp. nov.——2, Pygophore in ventral view; 3, left paramere in ventral view; 4, ditto in dorsal view; 5, phallus not fully prolonged in ventro-lateral view. Each scales 0.5 mm.

(=*sikkimensis* KIRITSHENKO) and *T. pallipes* JOSIFOV et KERZHNER by the large size of its body, less constricted pronotum and the markings of the pronotum, scutellum and hemelytra. Judging from the insufficient description by DISTANT (1904), *Gonatas majusculus* (current combination: *Trichodrymus majusculus*) from Tenasserim, India—I have not seen the type—seems to resemble this species in the size and coloration of the body. However, they differ from each other in the shape of the scutellum; besides, DISTANT's species is an inhabitant of tropical area, whereas this new species is restricted to northern Japan.

Stygnocorini

31. *Stygnocoris* sp.

Specimens examined: 1♀, Chiraibetsu, near Sarufutsu, 25–VIII–1977, M. SATÔ; 3♀, Shiretoko-toge, Rausu, 6–X–1988, Y. NISHIJIMA.

Notes. This genus has not been known from Japan. Though the species recorded here may be identified with *S. sabulosus* (SCHILLING, 1829), I prefer to suspend determination until specimens for comparison from continental Asia are available.

Ozophorini

32. *Prosomoeus brunneus* SCOTT, 1874 チャイロホソナガカメムシ

Specimens examined: 2♀, Mt. Esan–Ishida Spa, 14–VII–1970, S. KINOSHITA (EU); 2♀, Mt. Esan, 15–VII–1970, M. SAKAI; 1♀, Mt. Esan, 16–VII–1970, M. SAKAI (EU).

Myodochini

33. *Stigmatonotum rufipes* (MOTSCHULSKY, 1866) チビナガカメムシ

Specimens examined: 1♂, Komuke-genseikaen, near Monbetsu, 27–VIII–1977, M. TOMOKUNI; 2♂, Ubaranai, Abashiri, 11–IX–1974, Y. FURUKI (EU); 1♀, Futatsuiwa, Abashiri, 12–IX–1974, Y. FURUKI (EU); 2♂1♀, Kiyosato, Ikutawara-cho, Monbetsu, 27–VIII–1977, M. TOMOKUNI; 4♂2♀, Kamuikotan, Asahikawa, 4–IX–1974, Y. FURUKI (EU); 1♂1♀, Sôun-kyo, 4–IX–1977, A. ODA; 1♀, Iwabokki, Kushiro Marsh, 26–VIII–1990, M. SAKAI; 1♀, Nopporo, Sapporo, 31–VIII–1974, Y. FURUKI (EU); 1♂, Nopporo, Ebetsu, 2–VIII–1984, M. TOMOKUNI; 2♂, Mt. Moiwa, Sapporo, 29–VIII–1974, Y. FURUKI (EU); 1♂1♀, Hoheikyo, 30–VI–1958, M. UDAKA & M. MIYATAKE (EU); 2♀, Jozankei, 1–IX–1974, Y. FURUKI (EU); 2♀, Jozankei, 21–VIII–1977, M. TOMOKUNI; 1♂, Marukoma Spa, Lakeside of Shikotsu, 3–X–1968, S. HISAMATSU (EU); 1♀, Oonuma Park, 22–IX–1971, M. TOMOKUNI.

34. *Pachybrachius luridus* HAHN, 1826 ヒラタヒョウタンナガカメムシ

Specimens examined: 1♂1♀, Akanuma, Kushiro Marsh, 25–VIII–1990, M. SAKAI; 2♀, Utonai-numa, Tomakomai, 6–IX–1988, Y. NISHIJIMA.

Additional records on literature: Yukomanbetsu and Ashoro (HIDAKA, 1959); Hokkaido (HASEGAWA, 1960).

35. *Paraparomius lateralis* (SCOTT, 1874) キベリヒョウタンナガカメムシ

Specimens examined: 1♂, Utonai-numa, Tomakomai, 26–IX–1988, Y. NISHIJIMA; 4♂2♀, Hiroo, Tokachi, 27–VII–1984, M. TOMOKUNI; 2♂, Oonuma Park, 20–IX–1974, Y. FURUKI (EU).

Additional records on literature: Hokkaido (HASEGAWA, 1960); Rishiri Is. (TOMOKUNI, 1992).

36. *Togo hemipterus* (SCOTT, 1874) コバネヒョウタンナガカメムシ

Specimens examined: 1♂, Mt. Hakkenzan, Misumai, Sapporo, 20–VI–1986, M. TOMOKUNI; 5♂7♀, Jozankei, Sapporo, 25–IX–1991, M. TOMOKUNI; 3♂6♀, Konuma, Ohnuma Park, 30–VI–1988, S. MIYAKAWA; 1♀, Mt. Esan–Ishida Spa, 14–VII–1970, S. KINOSHITA (EU); 2♀, Tamaura, Okushiri Is., 11–X–1986, Y. KUSUI; 1♂, Shiokamagawa, Okushiri Is., 26–VI–1986, Y. KUSUI.

37. *Horridipamera inconspicua* (DALLAS, 1852) サビヒョウタンナガカメムシ

Specimen examined: 1♂, Tomuraushi Spa, 29–VII–1970, S. KINOSHITA (EU).

Notes. The collecting locality of the specimen is very questionable, because this tropical lygaeid is not distributed even in northern Honshu. It may be mislabeled.

Rhyparochromini

38. *Peritrechus femoralis* KERZHNER, 1976 ハマベナガカメムシ

Specimen examined: 1♀, Utonai-numa, Tomakomai, 5–IX–1988, Y. NISHIJIMA.

Notes. This species has been known only from Honshu and Kyushu in Japan. Dr. NISHIJIMA collected the above specimen from the bottom of a reed bush (*Phragmites communis*) growing on Utonai Marsh in Tomakomai.

39. *Panaorus japonicus* (STÅL, 1874) シロヘリナガカメムシ

Specimens examined: 2♀, Meguma-genseikaen, near Wakkanai, 25–VIII–1977, M. SATO; 1♀, Nakatonbetsu, Esashi-gun, 17–VII–1990, H. ONO; 1♀, Ubaranai, Abashiri, 11–IX–1974, Y. FURUKI (EU); 1♂, Kiyosato, Ikutawara-cho, Monbetsu-gun, 27–VIII–1977, M. TOMOKUNI; 1♂2♀, Kamuikotan, Asahikawa, 4–IX–1974, Y. FURUKI (EU); 1♂, Lakeside forest of Kussharo-ko, 27–VIII–1990, M. SAKAI; 1♂ 1♀, Shirogane Spa–Mt. Tokachi-dake, 10–IX–1977, A. ODA; 2♀, Kirakotan, Kushiro Marsh, 25–VIII–1990, M. SAKAI; 1♂, Mt. Moiwa, Sapporo, 29–VIII–1974, Y. FURUKI (EU); 1♂, Mt. Moiwa, Sapporo, 18–VI–1986, M. TOMOKUNI; 1♂5♀, Hitsujigaoka, Sapporo, 2–IX–1977, M. TOMOKUNI; 1♂, Hoheikyo, 30–VI–1958, M. MIYATAKE (EU); 4♂5♀, Jozankei, Sapporo, 25–IX–1991, M. TOMOKUNI; 3♂2♀, Jozankei, 1–IX–1974, Y. FURUKI (EU); 1♂, Shimamatsu, Eniwa-shi, 27–VI–1986, S. MIYAKAWA; 1♀, Noboribetsu, 30–VI–1986, M. TOMOKUNI; 1♀, Konuma, Ohnuma Park, 30–VI–1988, S. MIYAKAWA; 2♂1♀, Oonuma Park, 20–IX–1974, Y. FURUKI (EU); 1♂, Inaho, Okushiri Is., 10–X–1986, Y. KUSUI; 1♀, Tamaura, Okushiri Is., 27–VI–1986, Y. KUSUI; 1♀, Okushiri Port, Okushiri Is., 2–VIII–1986, Y. KUSUI; 1♀, Shiokamagawa, Okushiri Is., 26–VI–1986, Y. KUSUI.

40. *Paradieuches dissimilis* (DISTANT, 1883) チャモンナガカメムシ

Specimens examined: 1♂, Wakkanai Forest Park, Wakkanai, 24–IX–1991, M. TOMOKUNI; 3♂, Koeto, Wakkanai, 11–VII–1990, K. KUMADA; 3♂5♀, Moiwa, Tomari-mura, Shakotan, 23–VI–1986, M. TOMOKUNI; 1♀, Maruyama Park, Sapporo, 18–IX–1974, Y. FURUKI (EU); 8♂7♀, Mt. Moiwa, Sapporo, 29–VIII–1974, Y. FURUKI (EU); 1♀, Mt. Moiwa, Sapporo, 18–VI–1986, M. TOMOKUNI; 1♂, Sapporo, 26–V–1952, T. TOMIOKA (HU); 1♂, Nopporo Forest Park, Ebetsu, 26–VI–1986, M. TOMOKUNI; 1♀, Konuma, Ohnuma Park, 30–VI–1988, S. MIYAKAWA; 5♂3♀, Mt. Higure-yama, near Oonuma, Nanae, 28–VI–1986, M. TOMOKUNI; 4♂6♀, Mt. Higurashi-yama 303 m alt., Ohnuma Park, 30–VI–1988, S. MIYAKAWA; 2♂, Junsai-numa, Ohnuma Park, 1–VII–1988, S. MIYAKAWA; 2♀, Itagoya-rindo, Hakodate–Esan, Oshima, 2–VII–1988, S. MIYAKAWA; 1♀, Shiokamagawa, Okushiri Is., 26–VI–1986, Y. KUSUI.

Zoogeographical Discussion

Forty species of the Lygaeidae are recognized here from Hokkaido. Of these, 10 are newly recorded species including a new and two undetermined ones. This number of species is much fewer than that of the southern areas of Japan, even though insufficiency of entomological surveys in

Hokkaido is taken into consideration. It amounts to 30% of the total number of the known species of the Japanese Lygaeidae. It is well known that the fauna of Hokkaido is generally much poorer than those of other parts of Japan with the exception of some groups of animals, and that the faunal elements are considerably different between the two zoogeographical regions divided by the "BLAKISTON's line". These phenomena can also be recognized in the Japanese Lygaeidae. Of the 40 species known, only three, *Macropes obnubilus*, *Gastrodes grossipes japonicus* and *Neolethaeus dallasi*, are common between Hokkaido and the Ryukyu Islands, and about a half are common between Hokkaido and Shikoku and/or Kyushu. A similar pattern of distribution is also known in the Pentatomoidea and Tingidae (TOMOKUNI, 1979, 1987). Poorness of the lygaeid fauna of Hokkaido is chiefly due to the absence of groups composed of Oriental elements which are predominant in Southwest Japan. In the Japanese Lygaeidae, these species are particularly abundant in the Lygaeinae, and the Myodochini and Rhyparochromini of the Rhyparochrominae. Lack of these bugs is the most remarkable characteristics shown by the lygaeid fauna of Hokkaido.

要　　約

北海道は日本の中で，異翅半翅類の調査がもっとも行き届いていない地域のひとつである．筆者は，主として国立科学博物館に保管されている標本を調べた結果，文献からの引用も含めて，計40種のナガカメムシ類を見いだした．うち1種は *Trichodrymus* 属の未記載種で，ここに新たに命名記載した．また，種名未決定の2種を含めた4種，すなわち *Dimorphopterus spinolae*, *Geocoris* sp., *Eremocoris plebejus*, *Stignocoris* sp. が日本初記録種で，他の5種，すなわち *Iodinus ferrugineus*, *Gastrodes grossipes japonicus*, *Lamproplax unispina*, *Eremocoris angusticollis*, *Peritrechus femoralis* が北海道新記録種であった．

この地の調査が十分になされていない点を考慮にいれても，40種というのは，日本の他の地域のナガカメムシ相と比較して，非常に少ない数字である．北海道の動物相は，いくつかの例外的な動物群のほかは，概して貧弱であり，しかもその種構成が本州以南の地域のそれとは大きく異なることが一般に認められている．このような傾向はナガカメムシ類でも同様のように思える．ちなみに，40種のうち琉球列島との共通種はわずか3種で，四国あるいは九州との共通種も約半数に過ぎない．筆者が以前に行った，カメムシ上科やグンバイムシ科による分析（友国，1979, 1987）でも，今回と非常によく似た結果が得られている．これらと同様に，北海道のナガカメムシ相が貧弱な第一の要因として，西南日本で優勢な東洋区系の種の大多数が北海道に分布していないことがあげられる．このような種は，日本産のナガカメムシ科の中では，ナガカメムシ亜科およびヒョウタンナガカメムシ亜科の Myodochini 族と Rhyparochromini 族とにとくに多く，これらの亜科あるいは族のものがごく少ないことが，北海道のナガカメムシ相のきわだった特徴となっている．

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